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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,214	MIMAMINO, KATSUSHI	
	Examiner	Art Unit	
	MARCUS T. RILEY	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/20/2004; 11/04/2005; 12/15/2005; 07/31/2007; 08/27/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is responsive to applicant's remarks received on July 14, 2008. Claims 1-20 remain pending.

Response to Arguments

2. Applicant's arguments with respect to amended **claims 1, 2, 10, 11, 13, 16 and 20** filed on July 14, 2008 have been fully considered but they are not persuasive.

A: Applicant's Remarks

1. Applicant's invention solves this problem by providing an image scanning device that outputs scanned image information to a network, an image output device that outputs image information, and an information processing device that accepts the scanned image information and outputs image information to the image output device under a common protocol. For example, printer device 2 physically and directly connects to scanner device 1 via a communication cable. Scanner device 1 is connected to a hub 8 connected to PCs 3 and 4 via LAN 6. Thus, scanner device 1, hub 8 and PCs 3 and 4 constitute LAN 6, but the connection between printer device 2 and scanner device 1 does not (FIG. 1 and paragraph 0040). In this manner, the number of ports of hub 8 can be reduced and a copying process is provided without a PC (paragraphs 0043 and 0006).

Claim 1 is amended to emphasize this fundamental feature. In particular, in addition to reciting that the image output device is physically connected directly only to the image scanning device, claim 1 is further amended to recite that:

Since Yamamoto does not disclose each and every feature of claims 1, 2 and 10, it cannot anticipate those claims or claims 3-8 and 19 dependent thereon. The rejections of claims 1-8, 10 and 19 under 35 USC 102(b) should therefore be withdrawn.

2. ***Claims 9 and 12***

Independent claims 9 and 12 include the feature of an image scanning device providing "data instructing to interrupt or suppress transmission of the print data." During the telephone interview of March 13, 2008, applicant's representative pointed out that Yamamoto at column 11, lines 20-35 merely teaches notification and not instruction, and that the interpretation of notification as teaching instruction is unreasonably broad. In particular, an instruction is a command while notification merely provides information without any explicit or implied commands. Applicant notes that the Supervisory Examiner agreed with this reasoning during the interview and submitted that claims 9 and 12 would be reconsidered in more detail during prosecution. In this regard, applicant respectfully submits that the rejection of claims 9 and 12 are repeated verbatim from the final action without substantive rebuttal of Applicant's telephone argument's in either the Advisory Action of April II, 2008 or Office Action of May 15, 2008, other than to state that the rejections under 35 USC 102(b) are not withdrawn (page 5 of the Action). Should the Examiner maintain this position, clarification is respectfully requested.

Since Yamamoto does not disclose each and every element of claims 9 and 12, it cannot anticipate those claims. The rejections under 35 USC 102(b) should accordingly be withdrawn.

3. ***Claim Rejections - 35 USC 103(a) - Rosenlund***

Claims 11 and 16 are amended to recite an image output device not physically connected to an image scanning device via the network, as discussed above with respect to independent claims 1, 2 and 10. As discussed above,

Since Yamamoto, Rosenlund and Danknick do not disclose or suggest each and every element of claims 11 and 16, these claims and claims 17 and 18 dependent thereon are not obvious over Yamamoto, Rosenlund and Danknick. The rejections under 35 USC 103(a) of claims 11 and 16-18 should therefore be withdrawn.

Since Yamamoto, Maeda and Danknick do not disclose or suggest each and every element of claims 13 and 20, these claims and claims 14 and 15 dependent thereon are not obvious over Yamamoto, Maeda and Danknick. The rejections of claims 13-15 and 20 under 35 USC 103(a) should therefore be withdrawn.

A: Examiner's Response

1. Applicant's argues that claim 1 is amended to disclose wherein the image output device is physically connected directly only to the image scanning device:

Yamamoto discloses wherein the image output device is physically connected directly only to the image scanning device and the image output device is not physically connected to the

image scanning device via the network and wherein the image output device is not directly physically connected to the information processing device, but is connected to the information processing device via the image scanning device (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); See also (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices,"* column 7, lines 47-53)]. Furthermore see [(*"...a multi-functional system is known, in which an input device and an output device are connected directly (i.e., without intervening any computer serving as a control entity and data mediator), and the functions of the devices are combined, thereby providing a composite function."* column 1, lines 36-41). Here, Yamato specifically discloses where the input/output may be connected directly or indirectly. ("*The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."*). Furthermore, it is well known in art and obvious that an image scanning device or an image output device may be connected directly or indirectly. The option to connected directly or indirectly is well known.

Since Yamamoto disclose each and every feature of claims 1, 2 and 10, it anticipates those claims or claims 3-8 and 19 dependent thereon. Thus, the rejections of claims 1-8, 10 and 19 under 35 USC 102(b) are not withdrawn.

2. ***Claims 9 and 12***

Danknick '416 discloses data instructing to interrupt or suppress transmission of the print data (*"…the controller monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP to a functioning MFP."* column 2, lines 37-39); See also (*"…the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing."* column 5, lines 25-33).

3. As discussed above, Yamamoto discloses, teaches or suggests each and every element of claims 1, 2 and 10. Thus, claims 11 & 16 and claims 17 & 18 dependent thereon are obvious over Yamamoto, Rosenlund and Danknick. Therefore, rejections under 35 USC 103(a) of claims 11 and 16-18 are not withdrawn.

Since Yamamoto, Rosenlund and Danknick disclose, teach or suggest each and every element of claims 11 & 16, claims 17 & 18 dependent thereon are also obvious over Yamamoto,

Rosenlund and Danknick. Thus, the rejections under 35 USC 103(a) of claims 11 & 16-18 are not withdrawn.

Since Yamamoto, Maeda and Danknick disclose, teach or suggest each and every element of claims 13 & 20, and claims 14 & 15 dependent thereon are obvious over Yamamoto, Maeda and Danknick. Thus, the rejections of claims 13-15 & 20 under 35 USC 103(a) are not withdrawn.

Claim Objections

(The previous claim objections are withdrawn in light of the applicant's amendments.)

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. **Claims 1-8, 10 & 19** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yamamoto (US 7,167,258 hereinafter, Yamamoto '258).

Regarding claim 1; Yamamoto '258 discloses an image processing system comprising: an image scanning device that outputs via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200...*" column 12, lines 17-18); an image output device that visibly outputs image information input from a remote device (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device."* column 14, lines 27-32); an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the scanned image information to the image output device ("*A network interface 412 is connected to an input/output device such as the image scanner 200 or laser beam printer 300 through the network to execute communication control processing with each input/output device."* column 12, lines 17-20); and means for connecting the image scanning device, the image output device and the information processing device so that data can be exchanged by a common protocol (*"FIG. 1 is a block diagram showing the arrangement of a network including one image scanner and two laser printers. Each of the scanner and laser printers has a network board to connect itself to the*

network." column 10, lines 21-24). See *also* (*"The arrangements of the scanner as an input device suitable for application of this embodiment and the laser printer as an output device will be described next with reference to FIGS. 2 and 3. The application range of this embodiment is not limited to the image scanner or laser beam printer. This embodiment can also be applied to general digital information processing devices of any other input/output scheme, such as a facsimile device, digital camera, and image filing device."* column 10, lines 42-50); wherein the means for connecting connects the image scanning device and the information processing device to the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); wherein the image output device is physically connected directly only to the image scanning device and the image output device is not physically connected to the image scanning device via the network and wherein the image output device is not directly physically connected to the information processing device, but is connected to the information processing device via the image scanning device (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); See also (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the*

input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices," column 7, lines 47-53)]. Furthermore see [(*"...a multi-functional system is known, in which an input device and an output device are connected directly (i.e., without intervening any computer serving as a control entity and data mediator), and the functions of the devices are combined, thereby providing a composite function."* column 1, lines 36-41); wherein the image scanning device comprises: a port for connecting the image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a port for connecting the information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); and means for controlling to analyze destination information of data input from the ports and to switch connections of the ports in accordance with the destination information (*"Send-Transmission-Mode represents the transfer protocol and control direction supported in the transmission mode. "FTP/Passive, Active" described here means that the device having this device profile supports data transmission by FTP as a well-known file transfer protocol, and either this device or a transmission destination device can take the initiative in controlling data transfer."* column 15, lines 29-35).

Regarding claim 2; Yamamoto '258 discloses an image scanning device comprising: means for scanning an image (*"FIG. 2 is a block diagram for explaining the arrangement of an image scanner control system"* column 8, lines 52-53); means for outputting via a network, scanned image information obtained by scanning the image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200..."* column 12, lines 17-18). See also (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device."* column 14, lines 27-32); a port for connecting an image output device that visibly outputs remote image information input from a remote device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); wherein the image output device is connected directly only to the port of the image scanning device (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices,"* column 7, lines 47-53); a port for connecting an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the scanned image information to the image output device (*"A network interface 612 is*

connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device." column 13, lines 49-55); and the image output device is not physically connected to the image scanning device via the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); and wherein the image output device is not directly connected to the information processing device, but is connected to the information processing device via the image scanning device (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); See also (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices,"* column 7, lines 47-53)]. Furthermore see [(*"...a multi-functional system is known, in which an input device and an output device are connected directly (i.e., without intervening any computer serving as a control entity and data mediator), and the functions of the*

devices are combined, thereby providing a composite function." column 1, lines 36-41); a data exchanging protocol that exchange data between the image output device and the information processing device by a common protocol (*"Transmission-Mode represents the supported transfer protocol and control direction. "LPD/Passive, FTP/Passive" described here means that the device having this device profile supports data transfer by the protocols FTP and LPD (LPS), and this device is passively controlled by a remote device in data transfer. More specifically, the printer of this example receives print data to be printed in accordance with a request issued from the data transmission source."* column 14, lines 54-61); means for controlling to analyze destination information of data input from the ports and to switch connections of the ports in accordance with the destination information (*"Send-Transmission-Mode represents the transfer protocol and control direction supported in the transmission mode. "FTP/Passive, Active" described here means that the device having this device profile supports data transmission by FTP as a well-known file transfer protocol, and either this device or a transmission destination device can take the initiative in controlling data transfer."* column 15, lines 29-35).

Regarding claim 3; Yamamoto '258 discloses means for storing the destination information of the image scanning device ("*In an image scanner 200, a CPU 201 systematically controls accesses to various devices connected to a system bus 210 on the basis of a control program stored in the program ROM of a ROM 203 or a control program stored in an external storage device 205..."* column 10, lines 55-59); means for determining whether the destination information included in the data input to the port for the image output device is the image scanning device or a device other than the image scanning device (*"In accordance with the definition contents of the device profile of the input device, which is selected in step S1104, the*

device profile of an output device to which data can be output from the input device is searched for in step S1107. Search processing in step S1107 is shown in FIG. 12." column 16, lines 48-53); and means for retrieving the data inside when the destination information is the image scanning device and outputting the data to the port for the information processing device when the destination information is the device other than the image scanning device (*"In step S1101, an acquisition instruction for acquiring the device profile of the input device is transmitted. In step S1102, a response is waited for a predetermined period. If the entire network system normally functions, the requested profile data is searched for from pieces of information stored in the database of the server computer 500, and a response is returned."* column 16, lines 29-36).

Regarding claim 4; Yamamoto '258 discloses where the image scanning device where the means for controlling comprises: means for storing the destination information of the image output device ("*In an image scanner 200, a CPU 201 systematically controls accesses to various devices connected to a system bus 210 on the basis of a control program stored in the program ROM of a ROM 203 or a control program stored in an external storage device 205..."* column 10, lines 55-59); means for determining whether the destination information included in the data input to the port for the information processing device is the image scanning device, the image output device or other device (*"In accordance with the definition contents of the device profile of the input device, which is selected in step S1104, the device profile of an output device to which data can be output from the input device is searched for in step S1107. Search processing in step S1107 is shown in FIG. 12."* column 16, lines 48-53); means for retrieving the data inside when the destination information is the image scanning device, transmitting the data to the image

output device when the destination information is the image output device, and abandoning the data when the destination information is for other devices. (*"In accordance with the definition contents of the device profile of the input device, which is selected in step S1104, the device profile of an output device to which data can be output from the input device is searched for in step S1107. Search processing in step S1107 is shown in FIG. 12.* column 16, lines 48-53).

Regarding claim 5; Yamamoto '258 discloses a buffer that temporarily stores the data input to the port for the information processing device ("*In an image scanner 200, a CPU 201 systematically controls accesses to various devices connected to a system bus 210 on the basis of a control program stored in the program ROM of a ROM 203 or a control program stored in an external storage device 205...*" column 10, lines 55-59); and means for outputting the data to the port for the image output device when the destination information is the image output device, and after receiving data indicating a fact that the data has been received normally at the port for the image output device, abandoning the data (*"In accordance with the definition contents of the device profile of the input device, which is selected in step S1104, the device profile of an output device to which data can be output from the input device is searched for in step S1107. Search processing in step S1107 is shown in FIG. 12.* column 16, lines 48-53).

Regarding claim 6; Yamamoto '258 discloses where the means for controlling comprises: means for storing a status of "stored" or "not stored" by associating the status to the destination information of a device connected to the port for the image output device (*"In an image scanner 200, a CPU 201 systematically controls accesses to various devices connected to a system bus 210 on the basis of a control program stored in the program ROM of a ROM 203 or a control program stored in an external storage device 205, and receives an image signal from a*

scanner engine 206 as input information. The program ROM of the ROM 203 stores a control program for the CPU 201... If the image scanner has no external storage device 205 such as a hard disk or nonvolatile NVRAM, the data ROM of the ROM 203 stores setting information of the device." column 10, lines 55-65); where an initial status is the "not stored" status, and when data is output to the port for the image output device and data corresponding to a reception confirmation is input to the port for the image output device within a prescribed period of time, the status changes to the "stored" status. (*"In the laser beam printer 300, a CPU 301 systematically controls accesses to various devices connected to a system bus 310 on the basis of a control program stored in the program ROM of a ROM 303 or a control program stored in an external storage device 305, and outputs an image signal from a printer engine 306 as output information. The program ROM of the ROM 303 stores a control program for the CPU 301... If the printer has no external storage device 305 such as a hard disk, the data ROM of the ROM 303 stores setting information of the device."* column 11, lines 20-30).

Regarding claim 7; Yamamoto '258 discloses means for storing the destination information for permitting scanning of an image and/or outputting of an image or destination information for not permitting the scanning of the image and/or the outputting of the image (*"In an image scanner 200, a CPU 201 systematically controls accesses to various devices connected to a system bus 210 on the basis of a control program stored in the program ROM of a ROM 203 or a control program stored in an external storage device 205, and receives an image signal from a scanner engine 206 as input information. The program ROM of the ROM 203 stores a control program for the CPU 201... If the image scanner has no external storage device 205 such as a hard disk or nonvolatile NVRAM, the data ROM of the ROM 203 stores setting*

information of the device." column 10, lines 55-65); means for analyzing a transmitter address when an image scanning instruction and/or an image output instruction is input from the port for the information processing device, comparing the transmitter address with the stored destination information and determining whether or not to permit the instructions (*"Send-Transmission-Mode represents the transfer protocol and control direction supported in the transmission mode. "FTP/Passive, Active" described here means that the device having this device profile supports data transmission by FTP as a well-known file transfer protocol, and either this device or a transmission destination device can take the initiative in controlling data transfer."* column 15, lines 29-35).

Regarding claim 8; Yamamoto '258 discloses where the means for controlling comprises means for outputting data to the port for the information processing device, and switching connection status of a port section in accordance with whether or not data corresponding to a reception confirmation is input to the port for the information processing device within a prescribed period of time (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55).

Regarding claim 10; Yamamoto '258 discloses an image processing system comprising: an image scanning device that outputs via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an*

input/output device such as the image scanner 200..." column 12, lines 17-18); an image output device that visibly outputs image information input from a remote device (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device."* column 14, lines 27-32); an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the scanned image information to the image output device ("*A network interface 412 is connected to an input/output device such as the image scanner 200 or laser beam printer 300 through the network to execute communication control processing with each input/output device."* column 12, lines 17-20); and means for connecting the image scanning device, the image output device and the information processing device to the network so that data can be exchanged (*"FIG. 1 is a block diagram showing the arrangement of a network including one image scanner and two laser printers. Each of the scanner and laser printers has a network board to connect itself to the network."* column 10, lines 21-24); wherein the means for connecting connects the image scanning device and the information processing device to the network wherein the image output device is not physically connected to the image scanning device via the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); wherein the image scanning device comprises: a first port for connecting the image output device (*"A*

network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device." column 13, lines 49-55); a second port for connecting the information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); and means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to stop the scanning, and when available capacity in the means for storing recovers by progress of the network printing process, to restart the scanning, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device (*"In the laser beam printer 300, a CPU 301 systematically controls accesses to various devices connected to a system bus 310 on the basis of a control program stored in the program ROM of a ROM 303 or a control program stored in an external storage device 305, and outputs an image signal from a printer engine 306 as output information. The program ROM of the ROM 303 stores a control program for the CPU 301... If the printer has no external storage device 305 such as a hard disk, the data ROM of the ROM*

303 stores setting information of the device. A communication control section 308 can communicate with an external device such as a host computer through a network board 309 under the control of the CPU 301 and is designed to notify the host computer or the like of information in the printer." column 11, lines 20-35).

Regarding claim 19; Yamamoto '258 discloses a memory (*"A RAM 202 functioning as the main memory or work area of the CPU 201 is designed to expand its memory capacity using an optional RAM connected to an add-in port (not shown)"* column 11, lines 4-6).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 9 & 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto '258 in combination with Danknick (US 6,856,416 hereinafter, Danknick '416).

Regarding claim 9; Yamamoto '258 discloses an image processing system comprising: an image scanning device that outputs via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200...*" column 12, lines 17-18); an image output device that visibly outputs remote image information input from a remote device (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as*

a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device." column 14, lines 27-32); an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the image information to the image output device ("*A network interface 412 is connected to an input/output device such as the image scanner 200 or laser beam printer 300 through the network to execute communication control processing with each input/output device."* column 12, lines 17-20); and means for connecting the image scanning device, the image output device and the information processing device to the network so that data can be exchanged (*"FIG. 1 is a block diagram showing the arrangement of a network including one image scanner and two laser printers. Each of the scanner and laser printers has a network board to connect itself to the network."* column 10, lines 21-24); wherein the image scanning device comprises: a first port for connecting the image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a second port for connecting the information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); and means for controlling to output scanned image information from the first port via the network to the image output device in a copying

process, and when receiving a network printing request from the network through the second port during the copying process, to receive and accumulate print data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to transmit to the information processing device (*"In the laser beam printer 300, a CPU 301 systematically controls accesses to various devices connected to a system bus 310 on the basis of a control program stored in the program ROM of a ROM 303 or a control program stored in an external storage device 305, and outputs an image signal from a printer engine 306 as output information. The program ROM of the ROM 303 stores a control program for the CPU 301... If the printer has no external storage device 305 such as a hard disk, the data ROM of the ROM 303 stores setting information of the device. A communication control section 308 can communicate with an external device such as a host computer through a network board 309 under the control of the CPU 301 and is designed to notify the host computer or the like of information in the printer."* column 11, lines 20-35).

Yamamoto '258 does not expressly disclose data instructing to interrupt or suppress transmission of the print data.

Danknick '416 discloses data instructing to interrupt or suppress transmission of the print data (*"...the controller monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP to a functioning MFP."* column 2, lines 37-39); See also (*"...the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by*

user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing." column 5, lines 25-33).

Yamamoto '258 and Danknick '416 are combinable because they are from the same field of endeavor of image forming apparatuses (*"The present invention relates generally to image forming apparatuses..."* Danknick '416 at column 1, lines 36-37).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Yamamoto '258 by adding data instructing to interrupt or suppress transmission of the print data as taught by Danknick '416.

The motivation for doing so would have been to provide improved job processing capacity and higher reliability. (*"The apparatus and process described herein desirably provides improved job processing capacity and higher reliability."* Danknick '416 at column 2, lines 29-31).

Therefore, it would have been obvious to combine Yamamoto '258 and Danknick '416 to obtain the invention as specified in claim 9.

Regarding claim 12; Yamamoto '258 discloses an image scanning device comprising: means for outputting via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200..."* column 12, lines 17-18); a first port for connecting an image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network*

such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device." column 13, lines 49-55); a second port for connecting an information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); and means for controlling to output the scanned image information from the first port via the network to the image output device in a copying process, and when receiving a network printing request from the network through the second port during the copying process, to receive and accumulate print data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to transmit to the information processing device, data instructing to interrupt or suppress transmission of the print data (*"In the laser beam printer 300, a CPU 301 systematically controls accesses to various devices connected to a system bus 310 on the basis of a control program stored in the program ROM of a ROM 303 or a control program stored in an external storage device 305, and outputs an image signal from a printer engine 306 as output information. The program ROM of the ROM 303 stores a control program for the CPU 301... If the printer has no external storage device 305 such as a hard disk, the data ROM of the ROM 303 stores setting information of the device. A communication control section 308 can communicate with an external device such as a host computer through a network board 309 under the control of the CPU 301 and is designed to notify the host computer or the like of information in the printer."* column 11, lines 20-35).

Yamamoto '258 does not expressly disclose data instructing to interrupt or suppress transmission of the print data.

Danknick '416 discloses data instructing to interrupt or suppress transmission of the print data (*"…the controller monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP to a functioning MFP."* column 2, lines 37-39); See also (*"…the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing."* column 5, lines 25-33).

Yamamoto '258 and Danknick '416 are combinable because they are from the same field of endeavor of image forming apparatuses (*"The present invention relates generally to image forming apparatuses…"* Danknick '416 at column 1, lines 36-37).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by Yamamoto '258 by adding data instructing to interrupt or suppress transmission of the print data as taught by Danknick '416.

The motivation for doing so would have been to provide improved job processing capacity and higher reliability. (*"The apparatus and process described herein desirably provides improved job processing capacity and higher reliability."* Danknick '416 at column 2, lines 29-31).

Therefore, it would have been obvious to combine Yamamoto '258 and Danknick '416 to obtain the invention as specified in claim 12.

8. **Claims 11 & 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto '258 in combination with Rosenlund et al. (US 6,738,155, hereinafter Rosenlund '155).

Regarding claim 11; Yamamoto '258 discloses an image processing system comprising: an image scanning device that outputs via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200...*" column 12, lines 17-18); an image output device that visibly outputs image information input from a remote device (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device."* column 14, lines 27-32); an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the scanned image information to the image output device ("*A network interface 412 is connected to an input/output device such as the image scanner 200 or laser beam printer 300 through the network to execute communication control processing with each input/output device."* column 12, lines 17-20); and means for connecting the image scanning device, the image output device and the information processing device to the network so that data can be exchanged (*"FIG. 1 is a block diagram showing the arrangement of a network including one image scanner and two laser printers. Each*

of the scanner and laser printers has a network board to connect itself to the network." column 10, lines 21-24); wherein the means for connecting connects the image scanning device and the information processing device to the network wherein the image output device is not physically connected to the image scanning device via the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); wherein the image scanning device comprises: a first port for connecting the image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a second port for connecting the information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55).

Yamamoto '258 does not expressly disclose means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means

for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when an available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device.

Rosenlund '155 discloses means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when an available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device (*"HSM system 120 provides multi-tiered storage and automatic archiving and backup of electronic files communicated across private network 160 or public network 190. In one embodiment, HSM system 120 includes redundant arrays of inexpensive disks (RAID) fiber channel storage, which is highly scaleable and storage area network (SAN) capable. In this embodiment, HSM system 120 includes a capacity of greater than a Terabyte of RAID storage. Advantageously, the speed and high capacity of the RAID storage in HSM system 120 provides for storage and retrieval of high resolution images and other large files."* column 6, lines 4-14).

Yamamoto '258 and Rosenlund '155 are combinable because they are from same field of endeavor of network printers (*"...the present invention relates to a system and method of providing publishing and printing services via a communications network."* Rosenlund '155 at column 1, lines 8-10).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the network scanner taught by Yamamoto '258 by adding means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when an available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device as taught by Rosenlund '155.

The motivation for doing so would have been to provide a solution for communicating and managing printing and publishing services (*"The present invention provides a solution for communicating and managing printing and publishing services."* Rosenlund '155 at column 2, lines 31-32).

Therefore, it would have been obvious to combine Yamamoto '258 with Rosenlund '155 to obtain the invention as specified in claim 11.

Regarding claim 16; Yamamoto '258 discloses an image scanning device comprising: means for outputting via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200...*" column 12, lines 17-18); a first port for connecting an image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a second port for connecting an information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); wherein the image output device is not physically connected to the image scanning device via the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19).

Yamamoto '258 does not expressly disclose means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means

for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device.

Rosenlund '155 discloses means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device (*"HSM system 120 provides multi-tiered storage and automatic archiving and backup of electronic files communicated across private network 160 or public network 190. In one embodiment, HSM system 120 includes redundant arrays of inexpensive disks (RAID) fiber channel storage, which is highly scaleable and storage area network (SAN) capable. In this embodiment, HSM system 120 includes a capacity of greater than a Terabyte of RAID storage. Advantageously, the speed and high capacity of the RAID storage in HSM system 120 provides for storage and retrieval of high resolution images and other large files."* column 6, lines 4-14).

Yamamoto '258 and Rosenlund '155 are combinable because they are from same field of endeavor of network printers (*"...the present invention relates to a system and method of providing publishing and printing services via a communications network."* Rosenlund '155 at column 1, lines 8-10).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the network scanner taught by Yamamoto '258 by adding means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to decrease a scanning speed, and when available capacity in the means for storing recovers by progress of the network printing process, to increase the scanning speed, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device as taught by Rosenlund '155.

The motivation for doing so would have been to provide a solution for communicating and managing printing and publishing services (*"The present invention provides a solution for communicating and managing printing and publishing services."* Rosenlund '155 at column 2, lines 31-32).

Therefore, it would have been obvious to combine Yamamoto '258 with Rosenlund '155 to obtain the invention as specified in claim 16.

9. **Claims 13 & 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto '258 in combination with Maeda (US 6,557,033 hereinafter, Maeda '033).

Regarding claim 13; Yamamoto '258 discloses an image scanning device comprising: means for outputting via a network, scanned image information obtained by scanning an image of an original document (*"A network interface 412 is connected to an input/output device such as the image scanner 200..."* column 12, lines 17-18); a first port for connecting an image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a second port for connecting an information processing device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); wherein the image output device is physically connected directed only to the image scanning device and the image output device is not physically connected to the image scanning device via the network (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); and wherein the image output device is not directly physically connected to the information

processing device, but is connected to the information processing device via the image scanning device (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); See also (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices,"* column 7, lines 47-53)]. Furthermore see [(*"...a multi-functional system is known, in which an input device and an output device are connected directly (i.e., without intervening any computer serving as a control entity and data mediator), and the functions of the devices are combined, thereby providing a composite function."* column 1, lines 36-41).

Yamamoto '258 does not expressly disclose means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to stop the scanning, and when available capacity in the means for storing recovers by progress of the network printing process, to restart the scanning,

and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device.

Maeda '033 discloses means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to stop the scanning, and when available capacity in the means for storing recovers by progress of the network printing process, to restart the scanning, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device (*" ...the R controller 205 again starts the power supply to the resistor R3 after a lapse of a predetermined time T3 (>2.5 us). Consequently, the PC 102 recognizes the device as if to be disconnected, just as the device of the cable 401 of the downstream port is physically detached. The time T3 is determined as a time in which the PC 102 can delete the driver for the device (the printer driver or the scanner driver) and rearrange the inside of the system. When the power supply is restarted to the resistor R3, the waveform is the same as where the device is attached to the cable 401, and the voltage of data1 increases depending upon the resistance R3 and the capacitance of the cable. After a lapse of a certain time T1 (or timing 508), the potential of data1 exceeds Voh, so as to permit the port input to be recognized as a high level. Consequently, the PC 102 can find that the device is connected to the downstream port. Then the PC 102 can read the information from the device and install an*

appropriate driver (the scanner driver or the printer driver) based thereon." column 7, lines 13-31).

Yamamoto '258 and Maeda '033 combinable because they are from same field of endeavor of network systems (*"The present invention relates to a multi-functional composite apparatus, for example, connected to a network including computers, a control method thereof, and a network system therewith."* Maeda '033 at column 1, lines 11-14).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the network scanner unit as taught by Yamamoto '258 by adding means for controlling to output from the first port via the network to the image output device, print data received from the network through the second port in a network printing process, and when a copying instruction is input during the network printing process, to scan an image and to accumulate scanned image data until a means for storing reaches a prescribed accumulation amount, and when the means for storing reaches the prescribed accumulation amount, to stop the scanning, and when available capacity in the means for storing recovers by progress of the network printing process, to restart the scanning, and after an end of the network printing process, to output the accumulated scanned image data from the first port via the network to the image output device as taught by Maeda '033.

The motivation for doing so would have been to *provide a composite apparatus with good operability* (*"...an object of the invention is to provide a composite apparatus with good operability that is automatically recognized according to its function available, a control method thereof, and a network system therewith."* Maeda '033 at column 2, line 14-19).

Therefore, it would have been obvious to combine Yamamoto '258 with Maeda '033 to obtain the invention as specified in claim 13.

Regarding claim 20; Yamamoto '258 discloses an image processing system comprising: an image scanning device that outputs via a network, scanned image information obtained by scanning an image of an original document ("*A network interface 412 is connected to an input/output device such as the image scanner 200...*" column 12, lines 17-18); an image output device that visibly outputs image information input from a remote device (*"...the scanner of this example reads an original image using a transmission instruction from a remote device as a trigger, and transmits the read image data to the remote device as the transmission instruction source. An input device that starts such passive data transfer will be called a passive input device."* column 14, lines 27-32); an information processing device that accepts an input of the scanned image information from the image scanning device and that outputs the scanned image information to the image output device ("*A network interface 412 is connected to an input/output device such as the image scanner 200 or laser beam printer 300 through the network to execute communication control processing with each input/output device."* column 12, lines 17-20); wherein the image scanning device comprises: a port for connecting the image output device (*"A network interface 612 is connected to input and output devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device."* column 13, lines 49-55); a port for connecting the information processing device (*"A network interface 612 is connected to input and output*

devices such as the image scanner 200 and laser beam printer 300 through the network (devices related to the network such as the LAN and other external devices connected are not illustrated) to execute communication control processing with each input/output device." column 13, lines 49-55); and a controller that analyzes destination information of data input from the ports and switches connections of the ports in accordance with the destination information (*"Send-Transmission-Mode represents the transfer protocol and control direction supported in the transmission mode. "FTP/Passive, Active" described here means that the device having this device profile supports data transmission by FTP as a well-known file transfer protocol, and either this device or a transmission destination device can take the initiative in controlling data transfer."* column 15, lines 29-35); wherein the image output device is connected directly only to the port of the image scanning device, and wherein the image output device is not directly connected to the information processing device, but is connected to the information processing device via the image scanning device (*"When the subroutine is activated for the set of an input device and a plurality of output devices to be combined, a list including all paths from the given input device to the output devices is generated in step S3601. The paths can include both a path that directly connects the input and output devices and a path that connects the input and output devices through a proxy device."* column 39, lines 13-19); See also (*"...when a maximum value of the number of target output devices reachable through the relay devices counted by the relay path counting means is one, and a path for directly connecting the input device and the output device without intervening any relay device is present, determining to preferentially employ the path for directly connecting the input and output devices,"* column 7, lines 47-53)]. Furthermore see [(*"...a multi-functional system is known, in which an input device and an output device are*

connected directly (i.e., without intervening any computer serving as a control entity and data mediator), and the functions of the devices are combined, thereby providing a composite function." column 1, lines 36-41).

Yamamoto '258 does not expressly disclose a hub that connects the image scanning device, the image output device and the information processing device to the network so that data can be exchanged by a common protocol.

Maeda '033 discloses a hub that connects the image scanning device, the image output device and the information processing device to the network so that data can be exchanged by a common protocol ("*The printer-scanner composite apparatus 100 has a printer control circuit 201 for performing main control of the printer, a printer head for printing or a scanner head for reading of image, 210, a head detector 209 for detecting the type of head, a basic input/output system (BIOS) 206 for control of printer stored in ROM or the like, as a control program for execution of the main control of printer a transceiver unit 203 as a network interface for connection to the host computer or to a hub, and a timer 204 for control of the transceiver unit 203."* column 4, lines 21-30).

Yamamoto '258 and Maeda '033 are combinable because they are from the same field of endeavor of network systems (*"The present invention relates to a multi-functional composite apparatus, for example, connected to a network including computers, a control method thereof, and a network system therewith."* Maeda '033 at column 1, lines 11-14).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the network system as taught by Yamamoto '258 by adding a hub that connects

the image scanning device, the image output device and the information processing device to the network so that data can be exchanged by a common protocol as taught by Maeda '033.

The motivation for doing so would have been to *provide a composite apparatus with good operability* (*"...an object of the invention is to provide a composite apparatus with good operability that is automatically recognized according to its function available, a control method thereof, and a network system therewith.* Maeda '033 at column 2, line 14-19).

Therefore, it would have been obvious to combine Yamamoto '258 with Maeda '033 to obtain the invention as specified in claim 20.

10. **Claims 14 & 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto '258 in combination with Maeda '033 as applied to claim 13 above, and further in view of Danknick (US 6,856,416 hereinafter, Danknick '416).

Regarding claim 14; the combination of Yamamoto '258 and Maeda '033 does not expressly disclose an operation unit which includes means for instructing an interrupt copy where when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process.

Danknick '416 discloses an operation unit which includes means for instructing an interrupt copy (*"...the controller monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP to a functioning MFP."* column 2, lines 37-39); where when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process (*"...the Host 112 preferably monitors error occurrences with respect to print jobs and*

reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing." column 5, lines 25-33).

Yamamoto '258 and Maeda '033 are combinable with Danknick '416 because they are from the same field of endeavor of image forming apparatuses (*"The present invention relates generally to image forming apparatuses..."* Danknick '416 at column 1, lines 36-37).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by the combination of Yamamoto '258 and Maeda '033 by adding an operation unit which includes means for instructing an interrupt copy where when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process as the image forming apparatus as taught by Danknick '416.

The motivation for doing so would have been to provide improved job processing capacity and higher reliability. (*"The apparatus and process described herein desirably provides improved job processing capacity and higher reliability."* Danknick '416 at column 2, lines 29-31).

Therefore, it would have been obvious to combine Yamamoto '258 and Maeda '033 with Danknick '416 to obtain the invention as specified in claim 13.

Regarding claim 15; Danknick '416 discloses means for setting to execute one of the copying process and the network printing process preferentially (*"In utilizing multiple MFPs 112 in tandem mode, the Host 110 preferably initiates a process, referred to as dynamic load balancing ("DLB"), by which the progress of a print job is continually monitored, particularly with respect to the copy count of the print job. The Host 110 preferably keeps track of how many copies have been printed."* column 5, lines 15-21); where when there is a conflict of the copying process and the network printing process, a process set to be carried out preferentially by the means for setting is executed preferentially (*"…the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing."* column 5, lines 25-33).

11. **Claims 17 & 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto '258 in combination with Rosenlund '155 as applied to claim 16 above, and further in view of Danknick '416.

Regarding claim 17; Yamamoto '258 in combination with Rosenlund '155 does not expressly disclose an operation unit which includes means for instructing an interrupt copy, wherein when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process.

Danknick '416 discloses an operation unit which includes means for instructing an interrupt copy (*"…the controller monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP to a functioning MFP."* column 2, lines 37-39); wherein when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process. (*"…the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing."* column 5, lines 25-33).

Yamamoto '258 and Rosenlund '155 are combinable with Danknick '416 because they are from the same field of endeavor of image forming apparatuses (*"The present invention relates generally to image forming apparatuses…"* Danknick '416 at column 1, lines 36-37).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the image forming apparatus as taught by the combination of Yamamoto '258 and Rosenlund '155 by adding an operation unit which includes means for instructing an interrupt copy, wherein when the interrupt copy is instructed during the network printing process, the means for controlling controls to interrupt the network printing process and to execute a copying process as taught by Danknick '416.

The motivation for doing so would have been to provide improved job processing capacity and higher reliability. (*"The apparatus and process described herein desirably provides*

improved job processing capacity and higher reliability." Danknick '416 at column 2, lines 29-31).

Therefore, it would have been obvious to combine Yamamoto '258 and Rosenlund '155 with Danknick '416 to obtain the invention as specified in claim 16.

Regarding claim 18; Danknick '416 discloses means for setting to execute one of the copying process and the network printing process preferentially ("*In utilizing multiple MFPs 112 in tandem mode, the Host 110 preferably initiates a process, referred to as dynamic load balancing ("DLB"), by which the progress of a print job is continually monitored, particularly with respect to the copy count of the print job. The Host 110 preferably keeps track of how many copies have been printed."* column 5, lines 15-21); when there is a conflict of the copying process and the network printing process, a process set to be carried out preferentially by the means for setting is executed preferentially (*"…the Host 112 preferably monitors error occurrences with respect to print jobs and reroutes interrupted print jobs from a stalled or failed MFP 112 to a functioning MFP 112. An error is any event that disables an MFP 112 from printing or causes an MFP 112 to interrupt the printing of a print job. An error may be caused by hardware or software malfunction or by user interaction, such as if a user manually interrupts an MFP 112 while the MFP 112 is printing."* column 5, lines 25-33).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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